



What DoD Logisticians Should Know About the Army

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Introduction

As US military operations become increasingly joint and with the increased involvement of government interagency activities and coalition partners, it is beneficial for Department of Defense (DoD) logisticians, both military and civilian, to have a basic understanding of the organizational structure and logistics-related aspects of all the Services, not just the service they are assigned to. This article's focus is the Army. It is the fourth in a series; the previous articles were published in *The Army Logistician* and were aptly named "What Army Logisticians Should Know about the Air Force" (September-October 2003), "What Army Logisticians Should Know About the Navy" (November-December 2003), and "What Army Logisticians Should Know About the Marine Corps" (July-August 2003). All are online and available at <http://www.almc.army.mil/alog/index.asp>.

Sustaining Deployed Army Forces

The Army is America's senior service, having been founded in 1775. It also has the most members of any of the Services. From a logistics perspective, it has unique characteristics that offer certain challenges not faced by the other services. For instance, unlike Navy, Air Force, and Marine amphibious forces, the Army depends entirely on the other services or the civilian sector for strategic transportation lift. Moreover, as the primary land force, Army forces disperse over a wide area and in remote locations. This compounds the difficulties involved in supply chain management since—in such a distributed, noncontiguous environment—there are multiple transportation stops, potential mode changes (air to land, rail to road, sea to air, sea to land, and so on), and transload configuration changes (individual items being moved from 40-foot containers into 20-foot containers, 463L pallets to palletized load system trucks, multipack boxes to parts bins, and so on). Moreover, the software, hardware, telecommunications devices, computers, and automatic identification technology needed for an effective logistics management information network must be linked over extended distances and in austere environments. Thousands of information input sites are distributed over vast noncontiguous environments. Frankly, providing cost-effective, responsive, and visible sustainment to such a force is a formidable task.

For instance, for a logistics information network to be able to track the quantity of a specific truck tire available within an area of operations like Iraq, all the onhand visibility data associated

with this type of tire somehow must be transmitted to the network servers on at least a daily basis, preferably twice daily. This means every unit and support battalion within the area of operations—there could be more than a thousand units and tens of support units—that have or need the tire must transmit this information to a centralized data repository. However, unlike a ship or an established Air Force base, Army units forwardly deployed do not have telecommunications land lines or habitual satellite links. Providing logistics support and obtaining reliable logistics information in this type of environment, especially when forces are frequently relocating, is indeed a Herculean task. With this in mind, let us take a look at how the Army is structured and then review the transformational changes underway or planned.

The Total Army

According to the Army almanacs of 2002 and 2003, the active Army force has 485,000 soldiers and about 200,000 Department of the Army civilians. In addition, the Army Reserve has 206,000 soldiers, and the Army National Guard has 352,000 soldiers. The Army Reserve is controlled completely by the Federal Government and serves solely as a Federal reserve to the active Army. The Army National Guard, on the other hand, may be controlled by either the state or the Federal Government, depending on the circumstance. The Army Guard force structure consists of combat, combat support, and combat service support units, while the Army Reserve force is comprised primarily of combat support and combat service support. Both organizations are part of the Army, which consists of the Active, Guard, and Reserve components.

Rank and Pay Grade

The following are the ranks and corresponding pay grades within the Army, from lowest to highest. E stands for enlisted, WO stands for warrant officer, and O stands for officer. Trainee (E-1), private (E-2), private first class (E-3), corporal (E-4), sergeant (E-5), staff sergeant (E-6), sergeant first class (E-7), master sergeant (E-8), first sergeant (E-8 serving as top enlisted soldier in a company), sergeant major (E-9), command sergeant major (E-9 serving as the senior enlisted soldier in a battalion or higher), WO1, WO2, WO3, WO4, WO5, second lieutenant (O-1), first lieutenant (O-2), captain (O-3), major (O-4), lieutenant colonel (O-5), colonel (O-6), brigadier general (O-7), major general (O-8), lieutenant general (O-9), and general (O-10).

Army Organization

From smallest to largest, the Army is organized as follows: soldier, team, squad, platoon, company (also called troop by cavalry forces or battery by artillery forces), battalion (also called squadron by cavalry forces), brigade (also called group by logistics forces or regiment by special forces), division, corps, and army service component command (ASCC). Colloquially known as *The Ultimate Weapon*, the soldier is the foundation of the Army. Five soldiers make up a team, and two teams make up a squad. A squad is considered the smallest element within the Army. It typically has 9-11 soldiers and is led by a sergeant or staff sergeant. Two or more squads make up a platoon, which usually has about 40 soldiers and is led by a lieutenant. Two to four platoons make up a company, which is commanded by a captain and contains from 62 to 200 soldiers. Currently, companies are the smallest Army element to be routinely assigned unit identification codes and DoD Activity Address Codes. Four to six companies make up a battalion, which is commanded by a lieutenant colonel and has from 300 to 1,000 soldiers. Two to five battalions make up a brigade, which is commanded by a colonel and has from 3,000 to 5,000 soldiers. Three or more brigades typically make up a division, which is commanded by a major general and has from 10,000 to 17,000 soldiers. Two or more divisions make up a corps, which is commanded by a lieutenant general and has from 20,000 to 45,000 soldiers. The Army's largest suborganization is the ASCC. It typically has 50,000 plus soldiers, is made up of two or more corps, and is commanded by a lieutenant general or a general.

There are ten active-duty divisions in the Army: the 1st Armored Division and the 1st Infantry Division (Mechanized) home stationed in Germany; 2^d Infantry Division home stationed in Korea; 25th Infantry Division home stationed in Hawaii; 10th Mountain Division home stationed at Fort Drum, New York; 82^d Airborne Division home stationed at Fort Bragg, North Carolina; the 101st Air Assault Division home stationed at Fort Campbell, Kentucky; the 1st Cavalry Division and the 4th Infantry Division (Mechanized) home stationed at Fort Hood; and 3^d Infantry Division (Mechanized) home stationed at Fort Stewart, Georgia. Armored divisions and mechanized infantry divisions use armored vehicles (primarily M1 tanks, M2/3 Bradley fighting vehicles, and M113 armored personnel carriers). Both divisions have all three of these weapon systems, though armored divisions have more tanks than do mechanized infantry divisions.

There are four active corps headquarters: the 5th Corps, which oversees the 1st Armored and 1st Infantry Divisions in Germany; 3^d Corps, which oversees the 1st Cavalry and 4th Infantry Divisions at Fort Hood; 1st Corps, which oversees the 25th Infantry Division and 2^d Infantry Division; and 18th Airborne Corps, which oversees the 82^d Airborne Division, 10th Mountain Division, 101st Airborne Division, and 3^d Infantry Division (Mechanized).

There are five ASCCs. These theater-level commands include the US Army Europe headquartered in Germany, covering the US European Command area of responsibility; US Army Pacific, headquartered in Japan, covering the US Pacific Command area of responsibility; US Army South, headquartered in Texas, covering the US Southern Command's area of responsibility; Third Army, headquartered in Georgia, covering US Central Command's area of responsibility; and Eighth Army, headquartered in Korea.

Major Subordinate Commands

In addition to the five ASCCs just described, the Department of Army has the following major subordinate commands: the Forces

Command (FORSCOM), Army Special Operations Command, Training and Doctrine Command (TRADOC), Army Materiel Command (AMC), Army Medical Command, Surface Deployment and Distribution Command (SDDC)—formerly called the Military Traffic Management Command—US Army Intelligence and Security Command, Space and Missile Defense Command, Army Corps of Engineers, Army Criminal Investigation Command, and Army Military District Washington. Of these major subordinate commands, we will take a look at FORSCOM, TRADOC, and the SDDC. Then we will take a closer look at AMC.

Like the Air Force's Air Combat Command, the Navy's Fleet Forces Command and the Marine Corps' Marine Forces Atlantic, FORSCOM is an integral part of the Joint Forces Command and provides forces to the unified combatant commands. It is the Army's largest major subordinate command and is headquartered at Fort McPherson, Georgia. FORSCOM has more than 760,000 Active Army, Army Reserve, and Army National Guard soldiers; it trains, mobilizes, deploys, and sustains combat-ready forces capable of rapidly responding to crises worldwide.

TRADOC, like FORSCOM, is a four-star level command. It recruits, trains, and educates the soldiers; develops leaders; supports unit training; develops doctrine; establishes standards; and designs the future Army. TRADOC has three subordinate commands: the Combined Arms Center at Fort Leavenworth, Kansas; Maneuver Support Center at Fort Leonard Wood, Missouri; and Combined Arms Support Command (CASCOM) at Fort Lee, Virginia. CASCOM is the focal point for most of the Army's logistics training and doctrine development, with the notable exceptions of medical and engineer-related training. CASCOM maintains a Web site full of logistics information at <http://www.cascom.army.mil/>.

SDDC provides global surface deployment command and control and distribution operations. Similar to the Navy's Military Sealift Command (MSC) and the Air Force's Air Mobility Command, SDDC is an integral part of the Transportation Command. Cargo distribution and port management are its two critical missions. SDDC develops transportation contracts and container-leasing agreements and oversees the transportation management of freight containing tanks, fuel, ammunition, combat vehicles, food, and other commodities destined to locations throughout the world. In support of port management, SDDC serves as the single port manager at 25 locations worldwide and, as such, is responsible for all aspects of the ship loading and unloading process. The Transportation Engineering Agency of the SDDC—located in Newport News, Virginia—researches and publishes information about worldwide ports; how to load vessels and aircraft; and how to transport items by rail, road, air, or vessel. Its Web site is <http://www.tea.army.mil/index.htm>.

Army Materiel Command

Like TRADOC and the SDDC, AMC has a significant impact on operational logistics. It is comparable to the Air Force Materiel Command, Naval Supply Systems Command, and Marine Corps Materiel Command. AMC is the Army's premier provider of materiel readiness, to include technology, acquisition support, materiel development, logistics power projection, and sustainment. AMC operates the research, development, and engineering centers; Army Research Laboratory; depots; arsenals; and ammunition plants. It also maintains the Army's prepositioned stocks, both on land and afloat. AMC is headquartered at Fort Belvoir, Virginia. The total AMC

workforce, both civilian and military, approaches 50,000. Its subordinate commands are as follows: the Army Field Support Command (Provisional) (AFSC); Army Aviation and Missile Command; Army Communications-Electronics Command, Army Chemicals Materials Agency (Provisional); Army Research, Development, and Engineering Command (Provisional); Army Soldier and Biological Chemical Command; Army Tank-Automotive and Armaments Command; and Army Security Assistance Command.

One of the newer AMC subordinate commands is AFSC. It oversees the Army's prepositioned stocks and is a component of the strategic mobility triad of airlift, sealift, and global prepositioning. AFSC manages the prepositioned brigade sets of materiel, operational projects, and sustainment stocks positioned either afloat or in overseas, forward-deployed locations. Army prepositioned stock (APS)-2 is stored at several combat equipment group bases in Europe. APS-3 is afloat, APS-5 is maintained in storage in Kuwait and Qatar, and APS-4 is stored in Korea. To find out more about the Army's prepositioned stocks, visit the following Web site: <https://www6.osc.army.mil/fsc/mission/hqmission.asp>. AFSC also manages the Logistics Civil Augmentation Program for peacetime planning, warfighter exercises, and crisis action support.

Although considered a separate reporting activity and not a subordinate command of AMC, the Logistics Support Activity (LOGSA) serves as a central repository of critical supply, maintenance, and transportation data. Over the course of the last 10 years, this organization has evolved from managing multiple logistics information systems to managing a single, Web-based system called the Logistics Integrated Database (LIDB). It is used to access LOGSA's numerous logistics databases and acquisition tools. Entry to the LIDB is via the following Web site: <http://www.logsa.army.mil/pubs.htm>; however, a password is required. LOGSA publishes an excellent preventive maintenance publication geared toward junior soldiers (but actually read at all levels) called *Preventive Services*, available online at <http://www.logsa.army.mil/psmag/psonline.htm>.

Army Equipment

Providing logistics support, especially Class IX, to all the Army units worldwide is made ever the more challenging because of the extensive diversity of the major end items (Class VII) that combat, combat support, and combat service support (CSS) units employ. Army units must maintain planes; weapon systems; helicopters; trucks; generators; signal, engineer, medical, water purification, petroleum, ammunition, and food preparation equipment; and so forth for units spread across the depth and width of the battlefield.

Some of the major combat equipment includes the M1 Abrams tank, M2/M3 Bradley fighting vehicle, the M109 self-propelled Howitzer, M113 armored personnel carrier (all of which use tracks rather than wheels), and the AH-64 Apache attack helicopter. Some of the major combat support equipment includes the M9 armored earth mover; the M104 Patriot air defense missile; the M93 Fox nuclear, biological, chemical reconnaissance vehicle; the UH-60 Black Hawk utility helicopter; and the CH-47 Chinook heavy lift helicopter. Some of the major CSS equipment includes the family of medium truck vehicles, M-977 heavy expanded mobility tactical trucks, the palletized load system trucks, and heavy equipment transporter trucks.

Strategic Lift

As mentioned previously, the Army is the only service that depends on the other services—primarily the Navy's MSC and

the Air Force's Air Mobility Command—to provide all the strategic transportation needed for it to deploy overseas. There are complicated tradeoffs involved in determining the type and size of the Army force to be deployed. The heavier the force (heavy forces refer to the presence of armored vehicles—forces that have a substantial weight), the more lift is required to deploy the force, the larger the logistics footprint, and the longer the time required to reach the engagement area. Yet, the heavier the force, the less vulnerable it is once deployed, and the more firepower it has once it gets there. America's largest cargo planes, the C-5 Galaxy and C-17 Globemaster, can lift only one M1 Abrams tank at a time. The C-17 can lift up to four UH-60 Blackhawk helicopters, two AH-64 Apache attack helicopters, or three Bradley fighting vehicles. To give an idea of the magnitude of airlift required, the current armored division has more than 240 M1 tanks, more than 240 Bradley fighting vehicles, and 18 AH-64 attack helicopters, along with thousands of other vehicles, both tracked and wheeled, containers, and other equipment.

The Army's newest wheeled, yet armored, fighting vehicle, the 36,000-pound Stryker, can be transported on the ground using trucks or by air on C-5, C-17, and C-130 aircraft. The C-5 and C-17 aircraft can carry seven and four Strykers respectively.

One large medium-speed roll-on roll-off (LMSR) vessel or two fast sealift ships can lift almost an entire Stryker brigade combat team (SBCT). The LMSR and fast sealift ships have a draft of about 37 feet and a sustainable speed of about 25 knots. The MSC has 8 fast sealift ships and 20 LMSRs in its inventory.

Tactical Logistics

Once the strategic lift deploys Army forces to where they are required, tactical logistics moves to the forefront. From this perspective, there are three types of Army units: combat arms, combat support, and combat service support. The three types also are referred to as maneuver, maneuver support, and maneuver sustainment. This article stresses logistics support to combat arms units. At the unit level, the executive officer (typically a first lieutenant) oversees logistics. The executive officer is assisted by a supply sergeant and a maintenance sergeant. At the battalion level, the support, maintenance, and medical platoons of the headquarters and headquarters company provide logistics support to the battalion's organic units. At the brigade level, logistics organizations, called support battalions, provide additional logistics. Though support battalions may be made up of a wide variety of supply, maintenance, transportation, and medical companies, the typical brigade-level support battalion has a supply company (some supply companies are transitioning to distribution companies as they are fielded transportation assets), a maintenance company, and a medical company.

Forward support battalions provide support to divisional maneuver brigades. Brigade support battalions provide support to Stryker brigade combat teams. Corps support battalions (CSB) provide reinforcing logistics to maneuver brigades and primary logistics to corps units. The corps support battalions also provide *services* such as laundry, showers, water purification, airdrop, and mortuary affairs. A division's support battalions are organized within a brigade-level organization known as a divisional support command. Corps support battalions are organized within a brigade-level organization known as a corps support group. Two or more corps support groups help form a corps support command, which also has a materiel management center, a movement control battalion, and a troop support battalion.

The accounting, visibility, and control functions associated with supplies and maintenance are under the auspices of a materiel management center at both the division and corps level. The movement control office and movement control battalion perform the transportation control functions at the division and corps levels respectively.

The Theater Support Command (TSC) is at a level higher than that of the corps support command. Its mission is to maximize throughput and follow-on sustainment of Army forces and other supported elements regardless of the scale of operations. The TSC ensures that unit personnel, unit equipment, and commodities move to their point of employment with a minimum number of intervening stops and transfers. For this reason, the TSC establishes command of support operations and controls the distribution system before deploying elements arrive in the area of operations. The TSC provides overall sustainment support to Army forces. This support may include interim tactical-level support to early deploying corps and divisional elements.

Personnel, Equipment, and Supply Authorization Documents

There are a half dozen or so documents that authorize unit personnel, equipment, and supplies for Army forces. Examples include tables of organization and equipment (TOE), modified tables of organization and equipment (MTOE), tables of distribution and allowances, common tables of allowances (CTA), technical manuals, load lists, and stockage listings. A TOE lists all the personnel slots, skills required, and Class VII equipment that the Department of the Army has authorized a specific type of unit. TOEs normally are published at the battalion or separate company level and are models. Since different commands within the Army have different needs based on regional threats or environmental considerations, TOEs are used for MTOEs. For instance, a light infantry battalion in Alaska and one in Hawaii will be based on the same TOE. However, the actual MTOEs that each has will be different. The battalion located in Alaska will be authorized more cold weather gear, for example. By using the Web-based Total Army Authorization Document System software at <https://webtaads.belvoir.army.mil/usafmsa/>, logisticians can review the MTOEs for most, if not all, units within the Army. A password can be obtained by visiting the site.

Tables of distribution and allowance contain the same type of information as MTOEs except TDAs provide personnel and equipment authorizations for units generally considered nondeployable. These units normally are associated with organizations that support fixed facilities like installations or hospitals.

Common tables of allowance authorize expendable and durable supplies for both MTOE and TDA units but do not authorize Class VII items. Examples of common tables of allowances are the CTA 8-100 Army Medical Department Expendable and Durable Items (31 August 1994), CTA 50-900 Clothing and Individual Equipment (1 September 1994), CTA 50-909 Field and Garrison Furnishings and Equipment (1 August 1993), and CTA 50-970 Expendable/Durable Items—except: Medical, Class V, Repair Parts, and Heraldic Items (21 September 1990).

Army technical manuals describe how to operate and maintain Class VII items; they also serve as authorization documents for the expendable, durable, and nonexpendable supplies required to operate or maintain the Class VII items. Most of the Army's technical manuals can be viewed online by visiting the following Web site: <http://www.logsa.army.mil/pubs.htm>.

Basic loads, prescribed load lists (PLL), and authorized stockage lists also authorize durable and expendable items. Determining how much sustainment units will be allowed to stock perpetually is one of the Army's biggest logistics challenges. On the one hand, the more sustainment a unit brings to the fight, the longer it can operate without external support, and the less chance it will not have what it needs to accomplish its mission. On the other hand, the more sustainment a unit carries, the more strategic and tactical lift assets are required to move the unit. Greater unit-level sustainment also requires additional storage assets and greater funds tied up in inventory. For these reasons, units and support battalions are authorized to store and deploy with only a limited amount of sustainment stock. Sustainment stocks that accompany units during deployments are known as combat loads. The inventory associated with unit-level Class IX combat loads is known as the PLL. At the support battalion level, which provides additional sustainment to units, this inventory is known as the authorized stockage list. Authorized stockage lists are established for specific classes of supply, although bulk fuel, ammunition, and medical supplies are stored and accounted for separately from Class I, II, III (P), IV, VI, and Class IX. A detailed discussion of medical logistics, major end items, and ammunition is outside the scope of this article. While PLLs are intended for the owning unit only, authorized stockage lists are intended for all the *customer* units of the support battalion. Typically, a unit deploys with a 3-day combat load of Class I and bottled water; a 15-day combat load of packaged petroleum, oil, and lubricants; little or, perhaps, no Class IV barrier materiel; a basic load of Class V (normally a day of supply if actively engaged with the enemy); a 15-day supply of Class VI; no excess Class VII items; a small amount of Class VIII; and about 100 PLL lines of Class IX, most with a depth of only two or three items. Supply support activities will deploy with as much as they can, given their limited transportation and storage assets. Once deployed, supply support activities have to be resupplied, sometimes in 3 days or less, depending on the class of supply and the availability of host-nation support. Bulk fuel, bulk and packaged water, rations, and ammunition are quickly consumed.

Transformation

Improving logistics support is one of the key focuses of the planning associated with the Army's future force, a key part of which will be a new vehicle, under design, called the Future Combat System. The Future Combat System will have many of the same features of an M1 tank or an M2 Bradley fighting vehicle except it is envisioned to be much lighter. Current specifications state that it must be transportable by a C-130 aircraft.

While the Future Combat System will be part of a future force, a light armored, wheeled vehicle—the Stryker—already has been fielded and is a key component of the SBCT, formerly called the Interim Brigade Combat Team. The SBCT has 327 Stryker vehicles, and the brigade is roughly half the weight of an armored brigade and twice the weight of a light infantry brigade. The Army's short-term goal is to be able to deploy one SBCT in 4 days, a current division in 5 days, and five divisions within 30 days. With add-on reactive armor, the Stryker can withstand small arms, heavy machinegun, and handheld rocket-propelled grenade fire. A Stryker's combat-capable weight does not exceed 19 tons. All the vehicles and equipment of the entire SBCT weigh about 13,000 short tons. Excluding fuel and water, 3 days of sustainment for an SBCT weigh about 2,500 tons.

The Army's traditional brigade, divisional, corps, and ASCC structure also is being reviewed. The number of higher

headquarters will be reduced. Brigades and portions of divisions will be organized into a modular force called units of action. These will contain the traditional maneuver battalions, along with some combat support and combat service support traditionally provided by divisional or corps units. The Army envisions three types of maneuver units of action: armored units of action will have about 3,800 persons and 1,000 vehicles; infantry units of action will have about 3,000 persons, and Stryker units of action will have about 4,000 persons. There also will be aviation units of action and sustainment units of action. All told, there will be 21 infantry units of action, 22 armored units of action, and 5 SBCTs. The Army's goal is to have 48 active component units of action and 32 National Guard units of action. The higher level command and support organization for the units of action will be called a unit of employment (UE) (x). This one level of command will be able to conduct many of the same command and control missions being performed by the two levels of command associated with divisions and corps. A UE (x) will be capable of commanding at least six units of action, to include a marine expeditionary brigade or a portion thereof. A different type of UE—this one currently designated with a (y) versus an (x)—will serve at a higher level than the UE (x). The UE (y) will conduct many of the command and control missions formerly provided by the two levels associated with corps and ASCCs.

Additional Logistics Resources


In addition to the excellent logistics-related databases that LOGSA maintains, the Army has other Web sites that are invaluable to the joint logistician. For instance, Army Knowledge Online (AKO) at https://www.us.army.mil/portal/portal_home.jhtml is the official portal serving as the primary information management tool for the Army. All soldiers, Army retirees, DoD contractors, members of Federal agencies, and members of the other services can apply for a password. Having an AKO password allows users access to many other logistics portals managed by Army activities. The Army Command and General Staff College's Department of Logistics and Resource Operations maintains an informative Web site at <http://www-cgsc.army.mil/dlro/> and so does CASCOS at <http://www.cascom.army.mil/>.

Conclusion

The Army is structured to deploy to remote locations worldwide as part of a joint force. It has unique logistics challenges because of the distributed, noncontiguous methods of its employment. Providing logistics support to Army forces is made even more difficult by the diversity of equipment and by the dispersal of its forces. The Army is undergoing a major transformation of its force so that it can deploy large forces much more rapidly than it has in the past.


Notes

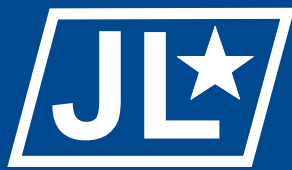
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15. Briefing, Maj Gen Robert Nixon, USA, Deputy Chief of Staff for Developments, TRADOC, Transformation to the Objective Force, 24 Jul 03.
16. Briefing, Headquarters Department of the Army, Deputy Chief of Staff, G-3, subject: Building Army Capabilities, 17 Feb 04.

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("Using the Airfield Simulation Tool for Airfield Capacity-Capability Assessment" continued from page 42)

3. Author's interview with 1st Lt Jefferson DeBerry, 88th Airfield Operations Flight, Wright-Patterson AFB, Ohio, 18 Jan 02.
4. Author's interview with Duane Ward, representative for freight contractor, Wright-Patterson AFB, Ohio, 22 Jan 02.
5. Author's interview with Col Dennis D'Angelo, 88th Logistics Group, Wright-Patterson AFB, Ohio, 11 Jan 02.
6. Ward; Statement of Work from Freight Operations Contract, Oct 98.
7. Air Force Pamphlet 10-1403, 1 Mar 98.
8. Author's interview with Lt Col Ronald Warner, Aeronautical Systems Center Chief of Safety, Wright-Patterson AFB, Ohio, 22 Mar 02.
9. Ward; Statement of Work from Freight Operations Contract.
10. DeBerry.
11. Author's interview with Billy Hassel, Air Force Flight Standards Agency, Andrews AFB, Maryland, 22 Jan 02.
12. Author's interviews with MSgt Marco Walton and TSgt Richard Meyer, 88th Airfield Operations Flight, Wright-Patterson AFB, Ohio, 18 Jan 02.
13. Author's interview with Tom Harris, Aeronautical Systems Center, Wright-Patterson AFB, Ohio, 23 Jan 02.
14. Author's interview with Col. Dennis D'Angelo, 88th ABW/CV, Wright-Patterson AFB, Ohio, 11 May 04.

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A part grouping system, however, effectively leverages a supply chain by arranging the production of individual items into groups that are based on common manufacturing processes.

Part Grouping

Angioplasty for the Supply Chain

Hey, *loggie* warfighter, your aged weapon systems are full of *tired iron*, you have diminishing manufacturing sources for mission critical spare parts, your industrial base is getting colder, and lead times are getting longer each day.

Agile Combat Support

Logistically, you have hardening of the arteries.



Colonel Michael C. Yusi, USAF

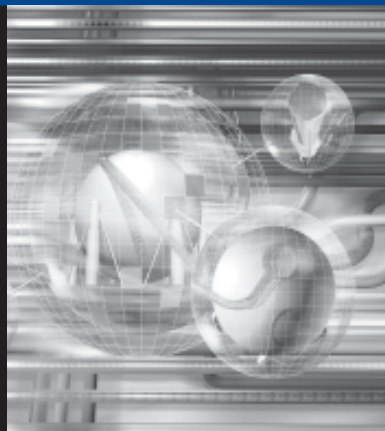
The Editorial Advisory Board selected "Part Grouping"—written by Colonel Michael C. Yusi, USAF, Vol XXVII, No 1—as the most significant article to appear in the *Air Force Journal of Logistics* in 2003.

The Japanese were not the first to ignore the importance and vulnerability of logistics.

Oil Logistics In the Pacific War

Lieutenant Colonel
Patrick H. Donovan, USAF

As long ago as 1187, history shows that logistics played a key part in the Muslim's victory over the Crusaders at the Battle of Hittin. The Muslim commander Saladin captured the only water source on the battlefield and denied its use to the Crusaders.



The Editorial Advisory Board selected "Oil Logistics in the Pacific War"—written by Lieutenant Colonel Patrick H. Donovan, USAF—as the most significant article to appear in Vol XXVIII, No 1 of the *Air Force Journal of Logistics*.

Lieutenant Colonel Joseph E. Diana, USAF

Improving Bare-Base Agile Combat Support

A Comparative Analysis Between Land Basing and Afloat Prepositioning of Bare-Base Support Equipment

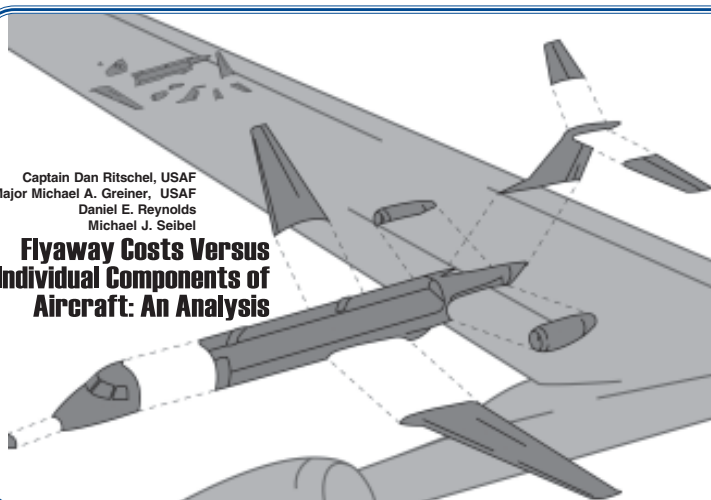
To improve Air Force agility in establishing bare-base operations, RAND and the Air Force Logistics Management Agency analyzed current conditions separately and recommended potential solutions.



The Editorial Advisory Board selected "Improving Bare-Base Agile Combat Support: A Comparative Analysis Between Land Basing and Afloat Prepositioning of Bare-Base Support Equipment"—written by Lieutenant Colonel Joseph E. Diana, USAF—as the most significant article to appear in Vol XXVIII, No 2 of the *Air Force Journal of Logistics*.

Captain Dan Ritschel, USAF
Major Michael A. Greiner, USAF
Daniel E. Reynolds
Michael J. Seibel

Flyaway Costs Versus Individual Components of Aircraft: An Analysis



The staff of the *Air Force Journal of Logistics* selected "Flyaway Costs Versus Individual Components of Aircraft: An Analysis"—written by Captain Dan Ritschel, USAF; Major Michael A. Greiner, USAF; Daniel E. Reynolds, and Michael J. Seibel, Vol XXVII, No 4—as the best article written by a junior officer to appear in the *Air Force Journal of Logistics* in 2003.